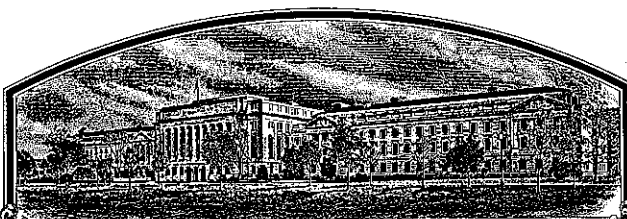


No.

9000236



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

**Bobby G. Garville, Agronomy Department**

**Louisiana Agricultural Experiment Station**

Whereas, THERE HAS BEEN PRESENTED TO THE

**Secretary of Agriculture**

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (ACT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'Buckshot 723'



In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this 30th day of June in the year of our Lord one thousand nine hundred and ninety-two.

Attest:

*Kenneth H. Warren*

Commissioner

Plant Variety Protection Office

Agricultural Marketing Service

*Edward M. Dignan*

Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

# APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) (as it is to appear on the Certificate) <b>Bobby G. Harville, Agronomy Department Louisiana Agricultural Experiment Station</b>		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO. <b>LA79-11123</b>	3. VARIETY NAME <b>Buckshot 723</b>
4. ADDRESS (street and no. or R.F.D. no., city, state, and ZIP)  <b>Room 112 Sturgis Hall, LSU Baton Rouge, LA. 70803</b>		5. PHONE (include area code)  <b>504-388-1216</b>	<b>FOR OFFICIAL USE ONLY</b> PVPO NUMBER <div style="font-size: 2em; text-align: center;">9000236</div>
6. GENUS AND SPECIES NAME <b>Glycine Max (L.) (Merr.)</b>	7. FAMILY NAME (Botanical) <b>Leguminosae</b>		
8. CROP KIND NAME (Common Name) <b>Soybean</b>	9. DATE OF DETERMINATION <b>Nov. 1979</b>		F I L I N G Date <b>August 10, 1990</b> Time <input type="checkbox"/> A.M. <input type="checkbox"/> P.M.
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) <b>Agricultural Experiment Station</b>			F E E S Filing and Examination Fee: <b>\$2150</b> Date <b>July 30, 1990</b>
11. IF INCORPORATED, GIVE STATE OF INCORPORATION	12. DATE OF INCORPORATION		R E C E I V E D Certificate Fee: <b>\$250.-</b> Date <b>June 22, 1992</b>
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS <b>Bobby G. Harville Agronomy Department, LSU Baton Rouge, LA 70803</b>			

PHONE (include area code): **504-388-1216**

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow INSTRUCTIONS on reverse)

- a. ☒ Exhibit A, Origin and Breeding History of the Variety.
- b. ☒ Exhibit B, Novelty Statement.
- c. ☒ Exhibit C, Objective Description of Variety.
- d. ☐ Exhibit D, Additional Description of Variety.
- e. ☒ Exhibit E, Statement of the Basis of Applicant's Ownership.
- f. ☒ Seed Sample (2,500 viable untreated seeds). Date Seed Sample mailed to Plant Variety Protection Office **July 26, 1990**
- g. ☒ Filing and Examination Fee (\$2,150) made payable to "Treasurer of the United States."

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See section 83(a) of the Plant Variety Protection Act.)  
☐ YES (If "YES," answer items 16 and 17 below) ☒ NO (If "NO," skip to item 18 below)

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?  
☐ YES ☒ NO

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?  
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?  
☐ YES (If "YES," through ☐ Plant Variety Protection Act ☐ Patent Act. Give date: \_\_\_\_\_)  
☒ NO

19. HAS THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETING IN THE U.S. OR OTHER COUNTRIES?  
☐ YES (If "YES," give names of countries and dates)  
☒ NO

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in section 41, and is entitled to protection under the provisions of section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT [Owner(s)] <b>Bobby G. Harville</b>	CAPACITY OR TITLE <b>Assoc. Prof.</b>	DATE <b>7/26/90</b>
SIGNATURE OF APPLICANT [Owner(s)] <b>R. W. Lipton</b>	CAPACITY OR TITLE <b>Director</b>	DATE <b>7/26/90</b>

Soybean  
'Buckshot 723'

14A. Exhibit A:

Pedigree: Tracy/N72-3213 = LA 79-11123

'Buckshot 723' is derived from the fifth generation of the cross N72-3213 to Tracy.

A modified pedigree breeding method was used. A selected  $F_2$  plant formed the population LA79-11123A1, which was bulked selected in the  $F_3$  and  $F_4$  generations.  $F_5$  plants were selected from LA79-11123A1-x-x for yield testing. The selected line of LA79-11123A1-x-x was last selected in the  $F_5$  generation.

The cross was part of a leaflet character study in which 'narrow-leaflet' soybeans were crossed to 'normal-leaflet' soybeans. In subsequent generations, plants were tested for stem canker resistance. Ratings for stem canker indicated that 'Buckshot 723' had the highest resistance to stem canker of any cultivar tested.

'Buckshot 723' appears stable and uniform through the five generations of selfing and during our seed increase program. Purple-flower offtypes appear less than 1:10000.

**14B: Exhibit B: Novelty Statement**

'Buckshot 723' is similar in growth habit to 'Pioneer® 9751'.  
'Buckshot 723' differs from 'Pioneer® 9751' in that it has white flowers while 'Pioneer® 9751' has purple flowers.

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
LIVESTOCK, MEAT, GRAIN & SEED DIVISION  
PLANT VARIETY PROTECTION OFFICE  
BELTSVILLE, MARYLAND 20705

EXHIBIT C  
(Soybean)

OBJECTIVE DESCRIPTION OF VARIETY  
SOYBEAN (*Glycine max* L.)

NAME OF APPLICANT(S) <u>Dr. Bobby G. Harville</u> Agronomy Department Louisiana Agricultural Experiment Station	TEMPORARY DESIGNATION <u>LA79-11123</u>	VARIETY NAME <u>Buckshot 723</u>
ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Code) <u>Room 112 Sturgis Hall, LSU</u> <u>Baton Rouge, LA 70803</u>		FOR OFFICIAL USE ONLY PVPO NUMBER <u>9000236</u>

Choose the appropriate response which characterizes the variety in the features described below. When the number of significant digits in your answer is fewer than the number of boxes provided, place a zero in the first box when number is 9 or less (e.g., 0 9).

## 1. SEED SHAPE:

1

1 = Spherical (L/W, L/T, and T/W ratios =  $\leq 1.2$ )  
3 = Elongate (L/T ratio  $> 1.2$ ; T/W =  $\leq 1.2$ )

2 = Spherical Flattened (L/W ratio  $> 1.2$ ; L/T ratio =  $\leq 1.2$ )  
4 = Elongate Flattened (L/T ratio  $> 1.2$ ; T/W  $> 1.2$ )

## 2. SEED COAT COLOR: (Mature Seed)

1

1 = Yellow      2 = Green      3 = Brown      4 = Black      5 = Other (Specify) \_\_\_\_\_

## 3. SEED COAT LUSTER: (Mature Hand Shelled Seed)

2June 1992

1 = Dull ('Corsoy 79'; 'Braxton')      2 = Shiny ('Nebsoy'; 'Gasoy 17')

## 4. SEED SIZE: (Mature Seed)

1 5

Grams per 100 seeds

## 5. HILUM COLOR: (Mature Seed)

6

1 = Buff      2 = Yellow      3 = Brown      4 = Gray      5 = Imperfect Black      6 = Black      7 = Other (Specify) \_\_\_\_\_

## 6. COTYLEDON COLOR: (Mature Seed)

1

1 = Yellow      2 = Green

## 7. SEED PROTEIN PEROXIDASE ACTIVITY:

1

1 = Low      2 = High

## 8. SEED PROTEIN ELECTROPHORETIC BAND:

2

1 = Type A (SP<sup>1a</sup>)      2 = Type B (SP<sup>1b</sup>)

## 9. HYPOCOTYL COLOR:

2

1 = Green only ('Evans'; 'Davis')      2 = Green with bronze band below cotyledons ('Woodworth'; 'Tracy')  
3 = Light Purple below cotyledons ('Beeson'; 'Pickett 71')  
4 = Dark Purple extending to unifoliate leaves ('Hodgson'; 'Coker Hampton 266A')

## 10. LEAFLET SHAPE:

3

1 = Lanceolate      2 = Oval      3 = Ovate      4 = Other (Specify) \_\_\_\_\_

## 11. LEAFLET SIZE:

☐ 31 = Small ('Amsoy 71'; 'A5312')  
3 = Large ('Crawford'; 'Tracy')

2 = Medium ('Corsoy 79'; 'Gasoy 17')

## 12. LEAF COLOR:

☐ 31 = Light Green ('Weber'; 'York')  
3 = Dark Green ('Gnome'; 'Tracy')

2 = Medium Green ('Corsoy 79'; 'Braxton')

## 13. FLOWER COLOR:

☐ 1

1 = White

2 = Purple

3 = White with purple throat

## 14. POD COLOR:

☐ 1

1 = Tan

2 = Brown

3 = Black

## 15. PLANT PUBESCENCE COLOR:

☐ 2

1 = Gray

2 = Brown (Tawny)

## 16. PLANT TYPES:

☐ 21 = Slender ('Essex'; 'Amsoy 71')  
3 = Bushy ('Gnome'; 'Govan')

2 = Intermediate ('Amcor'; 'Braxton')

## 17. PLANT HABIT:

☐ 1

1 = Determinate ('Gnome'; 'Braxton')

2 = Semi-Determinate ('Will')

3 = Indeterminate ('Nebsoy'; 'Improved Pelican')

## 18. MATURITY GROUP:

☐ 1 ☐ 0

1 = 000

2 = 00

3 = 0

4 = I

5 = II

6 = III

7 = IV

8 = V

9 = VI

10 = VII

11 = VIII

12 = IX

13 = X

## 19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

## BACTERIAL DISEASES:

☐ 2Bacterial Pustule (*Xanthomonas phaseoli* var. *sojensis*)☐ 2Bacterial Blight (*Pseudomonas glycinea*)☐ 0Wildfire (*Pseudomonas tabaci*)

## FUNGAL DISEASES:

☐ 0Brown Spot (*Septoria glycines*)Frogeye Leaf Spot (*Cercospora sojina*)☐ 0

Race 1

☐

Race 2

☐

Race 3

☐

Race 4

☐

Race 5

☐

Other (Specify)

☐ 0Target Spot (*Corynespora cassicola*)☐ 0Downy Mildew (*Peronospora trifoliorum* var. *manshurica*)☐ 0Powdery Mildew (*Microsphaera diffusa*)☐ 0Brown Stem Rot (*Cephalosporium gregatum*)☐ 2Stem Canker (*Diaporthe phaseolorum* var. *caulivora*)

## 19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant) (Continued)

## FUNGAL DISEASES: (Continued)

<input type="checkbox"/> 0	Pod and Stem Blight ( <i>Diaporthe phaseolorum</i> var; <i>sojae</i> )						
<input type="checkbox"/> 0	Purple Seed Stain ( <i>Cercospora kikuchii</i> )						
<input type="checkbox"/> 0	Rhizoctonia Root Rot ( <i>Rhizoctonia solani</i> )						
Phytophthora Rot ( <i>Phytophthora megasperma</i> var. <i>sojae</i> )							
<input type="checkbox"/> 0	Race 1	<input type="checkbox"/> Race 2	<input type="checkbox"/> Race 3	<input type="checkbox"/> Race 4	<input type="checkbox"/> Race 5	<input type="checkbox"/> Race 6	<input type="checkbox"/> Race 7
<input type="checkbox"/> Race 8	<input type="checkbox"/> Race 9	<input type="checkbox"/> Other (Specify) _____					

## VIRAL DISEASES:

<input type="checkbox"/> 0	Bud Blight (Tobacco Ringspot Virus)
<input type="checkbox"/> 0	Yellow Mosaic (Bean Yellow Mosaic Virus)
<input type="checkbox"/> 0	Cowpea Mosaic (Cowpea Chlorotic Virus)
<input type="checkbox"/> 0	Pod Mottle (Bean Pod Mottle Virus)
<input type="checkbox"/> 0	Seed Mottle (Soybean Mosaic Virus)

## NEMATODE DISEASES:

Soybean Cyst Nematode ( <i>Heterodera glycines</i> )					
<input type="checkbox"/> 0	Race 1	<input type="checkbox"/> Race 2	<input type="checkbox"/> Race 3	<input type="checkbox"/> Race 4	<input type="checkbox"/> Other (Specify) _____
<input type="checkbox"/> 0	Lance Nematode ( <i>Hoplolaimus Colombus</i> )				
<input type="checkbox"/> 0	Southern Root Knot Nematode ( <i>Meloidogyne incognita</i> )				
<input type="checkbox"/> 0	Northern Root Knot Nematode ( <i>Meloidogyne Hapla</i> )				
<input type="checkbox"/> 0	Peanut Root Knot Nematode ( <i>Meloidogyne arenaria</i> )				
<input type="checkbox"/> 1	Reniform Nematode ( <i>Rotylenchulus reniformis</i> )				
<input type="checkbox"/> -	OTHER DISEASE NOT ON FORM (Specify): <u>Moderate resistance to Wartelle Root-knot Nematode</u>				

## 20. PHYSIOLOGICAL RESPONSES: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

<input type="checkbox"/> 0	Iron Chlorosis on Calcareous Soil
<input type="checkbox"/> 0	Other (Specify) _____

## 21. INSECT REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

<input type="checkbox"/> 0	Mexican Bean Beetle ( <i>Epilachna varivestis</i> )
<input type="checkbox"/> 0	Potato Leaf Hopper ( <i>Empoasca fabae</i> )
<input type="checkbox"/> 0	Other (Specify) _____

## 22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant Shape	Pioneer Brand 9751	Seed Coat Luster	Braxton
Leaf Shape	Pioneer Brand 9751	Seed Size	Braxton
Leaf Color	Pioneer Brand 9751	Seed Shape	Sharkey
Leaf Size	Pioneer Brand 9751	Seedling Pigmentation	Tracy

## 23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data

VARIETY	NO. OF DAYS MATURITY	PLANT LODGING SCORE	CM PLANT HEIGHT	LEAFLET SIZE		SEED CONTENT		SEED SIZE G/100 SEEDS	NO. SEEDS/POD
				CM Width	CM Length	% Protein	% Oil		
Submitted	133	2.0	95	9	13	39.7	17.8	15	2-3
artz 7126 Name of Similar Variety	126	2.5	93	7.5	10.5	38.7	18.3	15	2-3

## PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
3. Hymowitz, T. 1973. Electrophoretic analysis of SBTI-A<sub>2</sub> in the USDA soybean germplasm collection. Crop Sci., 13: 420-421.
4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.



**14E. Exhibit E. State of the Basis of Applicant's Ownership**

The variety for which Plant Variety Protection is hereby sought was developed by Dr. Bobby G. Harville, an employee of Agronomy Department, Louisiana Agricultural Experiment Station, Louisiana State University Agricultural Center. All rights to any invention, discovery, or development made by the employee while employed by L.S.U. are retained by the employer.